

“This is only a **preview** of the exam questions. To take the actual exam, please refer back to the bulletin and click on the ‘**Click here to go to the Internet Exam**’ link at the bottom of the bulletin.”

Air Quality Engineer I and II

Department of Consumer Affairs

Training and Experience Evaluation

The California civil service selection system is merit-based, and eligibility for appointment is established through a formal examination process. The Department of Consumer Affairs Air Quality Engineer I & II examination consists of a Training and Experience evaluation used to evaluate your education, training and experience.

This Training and Experience evaluation is a scored component accounting for 100% of your rating in this examination. It is important to complete the questionnaire carefully and accurately. Your responses are subject to verification before appointment to a position.

Section 1: Task Ratings for Air Quality Engineer I and Air Quality Engineer II

Instructions:

Using the rating scale(s) provided below, you will rate your experience performing specific job-related tasks.

Respond to each of the following statements by indicating how the statement applies to you. You are required to respond to every statement by marking one option from the scale(s) provided.

In responding to each statement, you may refer to your FORMAL EDUCATION, FORMAL TRAINING COURSES, and WORK EXPERIENCE whether paid or volunteer.

ITEM #	<p>Years of experience I have performed this task for:</p> <ul style="list-style-type: none"> More than 5 years More than 3 years and up to 5 years More than 1 year and up to 3 years More than 6 months and up to 1 year 0 to 6 months <p>Knowledge related to performing this task:</p> <p>Extensive Knowledge I possess an expert knowledge level to the extent that I could effectively perform this task in the most difficult and complex situations; and I could instruct others on specific aspects of this task.</p> <p>Substantial Knowledge I possess an advanced knowledge level to the extent that I could effectively perform this task under the majority of circumstances or situations encountered.</p> <p>Moderate Knowledge I possess a sufficient knowledge level that would allow me to perform this task successfully in routine situations.</p> <p>Limited Knowledge I have some knowledge of how to perform this task, but may require additional instruction to apply my knowledge effectively.</p> <p>No Knowledge I have no knowledge of how to perform this task or what it may entail.</p>	EXPERIENCE	KNOWLEDGE
1	Evaluating the Smog Check program to ensure compliance with federal and state mandates.		
2	Developing reports used to evaluate the effectiveness of the Smog Check Program and station performance to ensure the program operates effectively.		

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3	Conducting research to determine optimal test methods and equipment requirements necessary to achieve program goals and compliance.		
4	Developing studies for various program elements (e.g., field offices, Roadside, Referee, Quality Assurance) to assess and improve program performance and compliance with legal requirements.		
5	Developing vehicle emission standards to measure whether vehicles are functioning properly.		
6	Conducting statistical analyses to aid in the decision making process.		
7	Utilizing data analysis software tools to manage and evaluate data.		
8	Analyzing statistical reports and test data to determine compliance with program requirements, laws, and regulations.		
9	Conducting research on technical problems associated with various smog check program elements to determine the source of the problem.		
10	Conducting research on technical problems associated with the design and operation of motor vehicle emissions control systems (e.g., vehicle test compatibility issues) to identify solutions to the problem.		

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11	Conducting root cause analysis for incidents defined as problems related to database systems to address the problems and develop solutions.		
12	Conducting quality control audits to improve processes and procedures and to verify compliance with certification standards and/or business requirements.		
13	Establishing test equipment specifications to balance program accuracy with technical feasibility.		
14	Developing test procedures to assess vehicle compliance with State and federal mandates.		
15	Participating in the creation of quality assurance guidelines and methodologies to ensure processes are in place for contractors and program elements to operate efficiently and accurately.		
16	Developing processes and criteria necessary to certify test equipment.		
17	Developing test scripts for software verification to ensure compliance with performance requirements.		

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18	Developing prototype equipment necessary for proof of concept in order to implement program improvements.		
19	Writing justification for technical equipment procurement to ensure proper equipment is in place.		
20	Conducting presentations to relay information related to programs, services, and/or projects in a clear and professional manner.		
21	Conducting research projects regarding program (e.g., Smog Check) performance in accordance with changing legislation and regulations to ensure programs are in compliance with updated legislation/regulations.		

Section 2: KSA Ratings for Air Quality Engineer I and Air Quality Engineer II

Instructions:

Using the rating scale provided below, you will rate your experience in accordance to specific job-related knowledge and abilities.

Respond to each of the following statements by indicating how the statement applies to you. You are required to respond to every statement by marking one option from the scale(s) provided.

In responding to each statement, you may refer to your FORMAL EDUCATION, FORMAL TRAINING COURSES, and WORK EXPERIENCE whether paid or volunteer.

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22	Knowledge of principles of physics to prescribe specifications, develop procedures, and evaluate new technologies.	
23	Knowledge of engineering principles (e.g., materials, stress analysis, statics and dynamics, thermodynamics, heat transfer, circuits, fluids) to prescribe specifications, develop procedures, and evaluate new technologies.	
24	Knowledge of chemistry principles as they relate to automotive emissions to prescribe specifications, develop procedures, and evaluate new technologies.	
25	Knowledge of scientific research methods to reach sound and defensible conclusions.	
26	Knowledge of statistics and statistical analysis methods to develop reports and/or analyze research data.	
27	Ability to examine data for anomalies, patterns, and/or other irregularities to assess for trends and/or potential issues.	
28	Ability to write a variety of documents (e.g., plans, technical reports, letters, technical manuals, white paper) using proper English and in a clear, concise, and technically accurate manner to ensure written information is relayed accurately.	

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29	Ability to read plans, charts, and graphs in order to complete work activities.	
30	Ability to read and understand technical documentation in order to understand issues surrounding emissions control systems.	

Section 3: Additional Task Ratings for Air Quality Engineer II

Instructions:

Using the rating scales provided below, you will rate your experience performing specific job-related tasks.

Respond to each of the following statements by indicating how the statement applies to you. You are required to respond to every statement by marking one option from the scale(s) provided.

In responding to each statement, you may refer to your FORMAL EDUCATION, FORMAL TRAINING COURSES, and WORK EXPERIENCE whether paid or volunteer.

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31	Evaluating cost effectiveness of the Smog Check program to ensure costs are in accordance with comparable control measures.		
32	Performing impact analysis to assess affect of proposed changes to legislation and regulation, program, and/or technology.		

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33	Developing test methodologies for software verification to ensure compliance with performance requirements.		
34	Developing methodologies for hardware testing to ensure compliance with performance requirements.		
35	Developing software requirements to ensure that the goals of the program are achieved in the most cost-effective and consumer-convenient manner.		
36	Writing scopes of work to include in contracts and interagency agreements.		
37	Writing summaries of study findings to document the conclusions for executive review.		
38	Providing input in the drafting of environmental regulations to ensure protection of public health and the environment.		
39	Developing project plans for the implementation of the enhancements to the Smog Check Program to meet the emission benefit goals.		
40	Training staff in various system areas to ensure the necessary expertise is obtained.		

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41	Coordinating test efforts across multiple business units to ensure requirements meet business needs.		
42	Reviewing technical documents (e.g., contract deliverables, scope of work, specifications, procedures manuals) to ensure documents are correct and complete in accordance with the Bureau of Automotive Repair's business needs.		
43	Developing policy and legislative proposals with immediate and long-range impact to make recommendations to senior management.		

Section 4: Additional KSA Ratings for Air Quality Engineer II

Instructions:

Using the rating scale provided below, you will rate your experience in accordance to specific job-related knowledge and abilities.

Respond to each of the following statements by indicating how the statement applies to you. You are required to respond to every statement by marking one option from the scale(s) provided.

In responding to each statement, you may refer to your FORMAL EDUCATION, FORMAL TRAINING COURSES, and WORK EXPERIENCE whether paid or volunteer.

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44	Knowledge of emission control systems to set applicable standards and test procedures.	
45	Knowledge of methods for measuring automotive emissions to ensure effective measuring techniques are employed.	
46	Ability to analyze data to assess for trends, conduct research, and/or ensure rules and regulations are followed.	
47	Ability to perform database trend analysis to prevent problems and optimize performance to meet the Bureau of Automotive Repair's business needs.	
48	Ability to identify station equipment requirements necessary to ensure stations have equipment available to perform accurate inspections and proper repairs.	
49	Ability to coordinate work activities with various individuals/entities (e.g., multiple business units, outside agencies, contractors) to ensure requirements meet business needs.	
50	Ability to conduct research on technical problems to determine the source of the problem and/or to support management and legislative decision-making processes.	

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51	Ability to write summaries of study findings to document the conclusions for executive review.	
52	Ability to write technical documents (e.g., fact sheets, public notices, internal memoranda, white papers) to support management and/or regulatory decision making process.	
53	Ability to identify priority on multiple projects and assignments to complete appropriate assignments based upon the Bureau of Automotive Repair's business needs.	